

## ABSTRACT

5        A downhole device processes particles entrained in a drilling fluid returning up a wellbore. In one embodiment, the device includes a housing having at least one cutting surface formed in a chamber of a housing. A cutting head disposed in the chamber crushes or comminutes the particles entrained in the drilling fluid to a predetermined size. The device is disposed in the wellbore  
10 and processes the entrained particles before they enter a selected wellbore device such as a pump. In certain embodiments, the housing has at least two chambers, wherein the entrained particles are reduced to a first predetermined size in the first chamber, a second predetermined size in the second chamber, etc. Also, the housing can include an operator that generates an energy field  
15 that reduces the size of the particles entrained in the drilling fluid to a first predetermined size when the particles flow through the energy field.